

## Exposed Tree Roots

Q: We have large surface roots in numerous places throughout our sloped back yard that we suspect is from our Black Walnut tree that is 50-60 feet tall. Stepping on those roots has caused us to slip and fall when they're covered up with leaves or snow. Because we have so many mature trees surrounding our property, how can we be certain the surface roots are from the Black Walnut Tree? If/when we remove the tree, what needs to be done to eliminate the surface roots? Thanks for your help. -CK in East Tennessee

A: Beyond being a safety hazard, your lawnmower is surely taking a beating in the bad areas with the exposed roots getting their share of a beating too.

Tree roots can spread much farther than one would think depending on water and nutrition availability. While researching your question, I came across a Harvard University paper on root propagation. Here is a link so you can have it for your information:

<http://arnoldia.arboretum.harvard.edu/pdf/articles/1989-49-4-tree-roots-facts-and-fallacies.pdf>.

Based on the Harvard information, you can't be sure that all those roots are from your walnut tree. From your statement about the mature trees surrounding your property, it sounds as if those are not all your trees. So some of those exposed roots may be attached to your neighbor's trees.

The first priority is to get rid of roots that may be approaching your concrete. Roots will eventually grow underneath, lift the concrete, and crack it. For the other roots in the sloped area, we recommend either covering them with dirt (preferably topsoil), smoothing, reseeding, and adding straw.

There are a couple of options for this situation. You said, "if/when we remove the tree", and we were wondering if you would be willing to save the tree. To address the problem of tree roots being a tripping hazard or rough riding on a lawn mower, we have a solution. Many folks have created a root safe zone around their tree by spreading a one-two inch layer of mulch or compost around the affected area and creating a garden there. A good rule of thumb for the safe zone is the dripline area of the tree. *Be careful not to pile the mulch up around the trunk.* Once you get the mulch down you might want to add some landscaping stones on the downhill side to keep your mulch or compost from washing away.

It is important to understand that the reason for exposed roots could be that rainwater runs down the hill instead of getting deeper into the tree's root system. Creating a root safe zone as described above will most likely solve that problem and slow down the rainwater running off before it has a chance to soak in. Here is a great YouTube video from the University of Nebraska on this subject:

<https://www.bing.com/videos/search?q=removing+old+tree+roots&&view=detail&mid=D33FE8B84365C47E027AD33FE8B84365C47E027A&&FORM=VDRVRV>.

Consider the root safe zone as a potential flower garden around this tree. Again, the benefit to this would be that the rain runoff would be less than it is now, and you would have flowers or

whatever you like to grow in that area. Here's a website link to a paper from the Mississippi State University on this subject: <https://extension.msstate.edu/gardening-steep-slopes>.

Keep in mind that since this is a black walnut, some plants will not grow very well in the area around it. Black Walnut trees secrete a chemical called Juglone from their leaves and root system and is poison to many plant varieties. However, plants such as Hosta, aster, phlox, wisteria, ajuga, Solomon seal, Shasta daisy and morning glory should survive. You may have some roots that are outside of your new garden, but you can cover these with dirt and smooth it out and reseed this area with straw added to prevent your seed from washing away.

For badly protruding roots, grinding them down or outright removal may be the best option. This option leads to another question: What will happen to my neighbor's tree if I start removing roots that are attached to their trees? A tree's roots supply nutrients and water to the upper branches so some of the branches biologically tied to the cut root may die. This may permanently harm the tree, but hopefully it will recover.

If you decide to cut the tree down, talk to your tree contractor about grinding the exposed roots along with the remaining stump. There are also chemical options for the stump, and we encourage you to call your local Extension office for chemical recommendations. If not properly applied, chemicals could impact the storm drains and groundwater. This is an important consideration since this started with an original issue of swift rainwater runoff. You could also mechanically remove the roots by cutting and pulling. Remember that cutting roots on a living tree may harm or kill the tree. For all these removal methods, you would then have to backfill the holes and reseed grass. Building a garden to create a root safe zone just seems easier and better for the ecosystem overall.

This was a tough question that a lot of folks in our area deal with and we appreciate you sending it. We hope this answered your question!

Come see us at the Farm Show on February 5<sup>th</sup>-6<sup>th</sup> at the Bristol Motor Speedway to ask us your gardening questions in person and check out vendors, farm supply and equipment, and connect with other folks who enjoy regional farming and gardening.

Tennessee Tree Day (March 20<sup>th</sup>) is coming! Order a tree or two and practice your newly acquired tree planting skills. Get more information at <https://www.tectn.org/tennesseetreeday.html>. There you can order trees and pick them up at a local UT-TSU Extension office or other sponsored locations near you. This is a great way to plant native trees and help Tennessee become greener.

Don't forget about Arbor Day! This day is observed by encouraging individuals and groups to plant trees. This year, Tennessee observes Arbor Day on March 5<sup>th</sup>, North Carolina observes on March 18<sup>th</sup>, Virginia and national Arbor Day observances are on April 29<sup>th</sup>. Arbor Day dates vary depending on climate and suitable planting season but is always observed in spring.